

## DISTRIBUTION OF THE FAMILY PERLIDAE IN WEST VIRGINIA (PLECOPTERA)<sup>1</sup>

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**ABSTRACT:** The distribution of the stonefly family Perlidae in West Virginia was studied from September 1973 to June 1974. Fourteen species were found in the state of which nine were new records. Significant increases in North American distribution were found for *Acroneuria perplexa* and *Perlesta frisoni*.

**DESCRIPTORS:** Stoneflies, taxonomy, distribution, family Perlidae, state and county records

This paper represents the first concentrated study dealing with Perlidae of West Virginia. Since the nymphs of these insects are aquatic and increase their ranges slowly, these records represent definite inhabitants of West Virginia and not a specimen that has strayed into the study area and not established itself.

A review of the literature reveals many studies dealing with the Plecoptera of the United States, Canada, and other countries. Very few of these studies have records of West Virginia perlid species (Needham and Claassen, 1925; Ricker, 1949). Records from other eastern states include Walker (1947), Berner (1948), Harden and Mickel (1952), Gaufin (1956), McCaskill and Prins (1968), Hitchcock (1974) and Surdick (1974). Recent investigations by Burrows (1971), Steele (1974), Hissom (1975), Tarter et al. (1975), Farmer and Tarter (1976), Tarter (1976) and Tarter et al. (1976) have added much information on Plecoptera of the state. The records listed in this paper are a compilation of various literature records, West Virginia Department of Natural Resources and the United States Department of Interior Surveys, unpublished museum records, and personal collecting efforts.

The state may be divided into seven major river systems (Janssen, 1944).

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These systems are:

- I. Ohio River
- II. Monongahela River
- III. Potomac River
- IV. Little Kanawha River
- V. Kanawha River
- VI. Guyandot River
- VII. Big Sandy River

and were described by Farmer and Tarter (1976).

This paper brings the total number of distributional records of Perlidae in West Virginia to fourteen species. The classification scheme used by the authors follows that of Illies (1966) and Zwick (1973). The list of Perlidae species follows.

**Subfamily Perlinae**  
**Genus *Paragnetina* Klapalek**

1) *P. media* (Walker)

Distribution: Braxton Co., Little Kanawha River. Fayette Co., Meadow River. Mingo Co., Laurel Fork. Monroe Co., Wolf Creek. Pendleton Co., Seneca Creek; White's Run. Pocahontas Co., Williams River. Randolph Co., Gandy Creek; Red Creek. Tucker Co., Blackwater River; Otter Creek; Shaver's Fork. Wayne Co., Twelvepole Creek. Webster Co., Cranberry River; Elk River; Williams River.

2) *P. immarginata* (Say)

Distribution: Clay Co., Elk River. Hardy Co., Lost River. Mineral Co., New Creek; Patterson Creek. Nicholas Co., Cherry River. Pendleton Co., Brush Creek; Potomac River; White's Run. Pocahontas Co., Williams River. Preston Co., Wolf Creek. Randolph Co., Gandy Creek; Shaver's Fork. Tucker Co., Blackwater River; Otter Creek; Shaver's Fork. Webster Co., Cranberry River; Elk River; Williams River.

**Genus *Phasganophora* Klapalek**

3) *P. capitata* (Pictet)

Distribution: Braxton Co., Little Kanawha River. Clay Co., Elk River. Greenbrier Co., Greenbrier River. Mercer Co., East River. Monroe Co., Dry Fork. Nicholas Co., Cherry River. Pocahontas Co., Elk River; Day Run; Greenbrier River. Preston Co., Wolf Creek. Randolph Co., Gandy Creek. Summers Co.

**Genus *Neoperla* Needham**

4) *N. clymene* (Newman)

Distribution: Berkeley Co., Back Creek. Brooke Co., Buffalo Creek. Cabell Co., Mud River. Fayette Co., New River. Greenbrier Co., Greenbrier River. Hardy Co., Lost River. Mason Co., Eighteen Mile Creek. Mercer Co., Bluestone River. Mineral Co., Patterson Creek. Monongalia Co., White's Run. Monroe Co., Indian Creek; Salt Sulfur Springs; Wolf Creek. Pendleton Co., Brush Creek. Wayne Co., Twelvepole Creek.

**Subfamily Acroneuriinae**  
**Genus *Acroneuria* Pictet**

5) *A. abnormis* (Newman)

Distribution: Berkeley Co., Back Creek. Boone Co., Hopkin Fork. Braxton Co., Little Kanawha River. Clay Co., Elk River. Fayette Co., Mann's Creek; New River. Grant Co., Jordan Run. Greenbrier Co., Greenbrier River. Hampshire Co., Cacapon River. Jackson Co., Mill Creek. Lincoln Co., Mud River. Logan Co., Copperas Mine Fork. Marion Co., Prickett's Creek. Mineral Co., New Creek. Mingo Co., Laurel Fork. Monongalia Co., White Day Creek. Morgan Co., Sleep Creek. Pendleton Co., Brush Creek; North Fork; Seneca Creek; White's Run. Pocahontas Co., Day Run; Greenbrier River; Laurel Creek; Tea Creek; Williams River. Preston Co., Cheat River; Wolf Creek. Randolph Co., Gandy Creek; Shaver's Fork; Tygart River. Summers Co. Tucker Co., Blackwater River; Shaver's Fork. Upshur Co., Buckhannon River. Wayne Co., Camp Creek. Webster Co., Williams River. Wyoming Co., Huff Creek.

6) *A. carolinensis* (Banks)

Distribution: Barbour Co., Middle Fork River. Boone Co., Skin Creek. Braxton Co., Little Kanawha River. Clay Co., Elk River. Fayette Co., Bracken Creek; Buffalo Creek; Dempsey Branch; Dowdy Creek; Falls Creek; Gauley River; Hendrick's Run; Kenney Creek; Laurel Creek; Pack's Branch; Rich Creek; Twentymile Creek. Greenbrier Co., Cherry River. Hampshire Co., Little Cacapon River. Hancock Co., Hardin Creek. Lewis Co., Little Kanawha River. Logan Co., Copperas Mine Fork; Island Creek. Mercer Co., Bluestone River. Mingo Co., Laurel Fork. Monongalia Co., White Day Creek. Morgan Co., Sleep Creek. Nicholas Co., Cherry River. Pendleton Co., White's Run. Pocahontas Co., Day Run; Elk River; Greenbrier River; Hill Creek; Island Creek Run; Williams River. Preston Co., Wolf Creek. Randolph Co., Gandy Creek; Shaver's Fork. Wayne Co., Camp Creek. Webster Co., Williams River. Wetzel Co., Arches Run. Wyoming Co., Huff Creek.

7) *A. evoluta* Klapalek

Distribution: Pocahontas Co., Greenbrier River. Summers Co., Indian Creek.

8) *A. internata* (Walker)

Distribution: Berkeley Co., Back Creek. Braxton Co., Little Kanawha River. Fayette Co., Greenbrier Co., Greenbrier River. Mineral Co., Patterson Creek. Monongalia Co., White Day Creek. Morgan Co., Sleep Creek. Pocahontas Co., Greenbrier River. Preston Co., Cheat River; Big Sandy Creek. Randolph Co., Tygart Valley River. Summers Co., Greenbrier River; New River. Webster Co., Elk River; Williams River.

9) *A. lycorias* (Newman)

Distribution: Barbour Co., Middle Fork River. Berkeley Co., Back Creek. Boone Co.,

Pond Fork. Braxton Co., Little Kanawha River. Grant Co., Greenbrier River; Cherry River. Lewis Co., Little Kanawha River. Lincoln Co., Fall Creek; Guyandot River; Mud River. Monongalia Co., Dent Run; White Day Creek. Monroe Co., Wolf Creek. Pocahontas Co., Preston Co., Big Sandy Creek; Cheat River. Randolph Co., Gandy Creek; Shaver's Fork. Ritchie Co., North Fork Hughes River. Roane Co., Little Kanawha River. Wayne Co., Twelvepole Creek. Webster Co., Williams River. Wood Co., North Fork River. Wyoming Co., Huff Creek.

#### 10) *A. perplexa* Frison

Distribution: Barbour Co., Middle Fork River. Brooke Co., Buffalo Creek. Doddridge Co., Arnold's Creek. Gilmer Co., Steer Run. Jackson Co. Lincoln Co. Marion Co., Prickett's Creek. Mason Co., Sixteen Mile Creek. Mingo Co., Laurel Fork. Monongalia Co., White's Run. Pleasants Co., French Creek. Pocahontas Co., Greenbrier River. Summers Co., Greenbrier River. Upshur Co., Little Kanawha River. Wayne Co., Mill Creek. Wirt Co., Tucker Creek.

### Genus *Eccopectera* Klapalek

#### 11) *E. xanthenes* (Newman)

Distribution: Berkeley Co., Back Creek. Jackson Co., Cow Creek. Lincoln Co., Laurel Creek; Mud River; Straight Creek. Logan Co., Copperas Mine Fork; Trace Fork. Monongalia Co., White's Run. Mingo Co., Nicholas Co. Pocahontas Co., Greenbrier River. Ritchie Co., Jug Handle Run. Roane Co., Pocatamico River. Wayne Co., Camp Creek.

### Genus *Perlesta* Banks

#### 12) *P. placida* (Hagen)

Distribution: Braxton Co., Little Kanawha River. Clay Co., Elk River. Greenbrier Co. Hampshire Co., Cacapon River. Jackson Co., Mill Creek. Jefferson Co., Shenandoah River. Monongalia Co., White Day Creek. Pendleton Co., Brush Creek. Pleasants Co. Pocahontas Co., Cumming's Creek. Preston Co. Putnam Co. Randolph Co., Leading Creek. Tyler Co. Wayne Co., Twelvepole Creek. Wirt Co.

#### 13) *P. frisoni* Banks

Distribution: Boone Co., Pond Fork. Cabell Co., Fourpole Creek. Clay Co., Elk River. Doddridge Co., Arnold's Creek. Fayette Co., Opposum Creek; Rich Creek. Greenbrier Co., North Fork Cherry River. Jackson Co., Mill Creek. Lincoln Co., Bear Creek; Buffalo Creek; Green Shoal Branch; Trace Fork. Logan Co., Trace Fork. Mason Co., Rock Fork. Pendleton Co., Seneca Creek. Pleasants Co. Pocahontas Co., Tea Creek. Putnam Co., Heizer Creek. Randolph Co., Gandy Creek; Shaver's Fork. Tyler Co. Wayne Co., Camp Creek. Webster Co., Laurel Run; Williams River. Wirt Co. Wood Co.

### Genus *Perlinella* Banks

#### 14) *P. drymo* (Newman)

Distribution: Cabell Co., Fourpole Creek. Greenbrier Co., Cherry River. Putnam Co. Tucker Co.

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